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10/680,018	10/06/2003	Lyman Leonard Hall	MP1108 (13036/121)	4703

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EXAMINER	
KASSA, HILINA S	
ART UNIT	PAPER NUMBER
2625	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	**Application No.** 10/680,018	**Applicant(s)** HALL ET AL.
	Examiner Hilina S. Kassa	**Art Unit** 2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10/06/2003*.
2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1-16* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on *03 May 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a)☐ All b)☐ Some * c)☐ None of:
1.☐ Certified copies of the priority documents have been received.
2.☐ Certified copies of the priority documents have been received in Application No. _____.
3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date *05/19/06*.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The preliminary amendment submitted on 04/26/07 has been acknowledged.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-16 are rejected under 35 U.S.C. 102(e) as being anticipated by Marshall et al. (US Publication Number 2004/0156079 A1).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

(1) regarding claim 1:

As shown in figure 1A, Marshall et al. discloses a printing system (paragraph 16, lines 1-3) comprising:

a host machine including (102, figure 1A),

an application to generate page data at a predetermined bit rate per plane per pixel (paragraph 17, lines 5-9),

an image processor (104, figure 1A), based on image data contained in a pixel or a group of pixels in the page data (paragraph 17, lines 9-12), to render interim data that contains a multi-bit value per plane per pixel including print engine control information for the pixel or the group of pixels (paragraph 17, lines 5-12), and

an I/O device to communicate the interim data (116, figure 1A; paragraph 17, line 2); and

a printing device including (120, figure 1A),

an I/O device to communicate the interim data (126, figure 18; paragraph 18, line 1-5),

a pulse code generator (206, figure 2), to receive the interim data (paragraph 21, lines 6-9), for each multi-bit value (paragraph 21, lines 10-14), and to generate a pulse code corresponding to the multi-bit value (paragraph 22, lines 1-8), and

a print engine (130, figure 1A), to receive the pulse codes and to transform the pulse codes to a hardcopy image (paragraph 24, lines 1-4).

(2) regarding claim 2:

Marshall et al. further discloses, a printing system, as defined in claim 1, wherein each multi-bit value comprises print parameters (paragraph 24, lines 1-11).

(3) regarding claim 3:

Marshall et al. further discloses, a printing system, as defined in claim 2, wherein the print parameters are selected from a group that includes [[as]] toner miser mode, toner explosion, and edge roll off (paragraph 44, lines 17-19; note that the claim calls for "selected from a group").

(4) regarding claim 4:

Marshall et al. further discloses, a method for rendering a hardcopy image (paragraph 17, lines 5-7) comprising:

on a host machine (102, figure 1A),

generating page data at a selected bit rate per plane per pixel (paragraph 17, lines 5-9), examining pixel data for a pixel or a group of pixels in the page data (paragraph 17, lines 9-12), either individually or in relation to neighboring pixels (paragraph 17, lines 13-16);

based on the pixel data, rendering data to interim multi-bit values per plane per pixel interim value (paragraph 19, lines 1-3), the rendered data including print engine control information for the pixel or the group of pixels, and transferring the interim multi-bit values (paragraph 19, lines 4-7); and

on a printing device (120, figure 1A),

transferring the interim multi-bit values to and from the host machine (paragraph 18, lines 1-8), generating pulse codes from the interim multi-bit values (paragraph 21, lines 10-14), and rendering a hardcopy image from the pulse codes (paragraph 24, lines 1-4).

(5) regarding claim 5:

Marshall et al. further discloses, a method for rendering a hardcopy image as defined in claim 4, wherein each multi-bit value comprised print parameters (paragraph 24, lines 1-11).

(6) regarding claim 6:

Marshall et al. further discloses, a method for rendering a hardcopy images as defined in claim 5 wherein the print parameters are selected from a group that includes [[as]] toner miser mode, tone explosion, and edge roll off (paragraph 44, lines 17-19; note that the claim calls for "selected from a group").

(7) regarding claim 7:

Marshall et al. further discloses, a host machine comprising (102, figure 1A):

an application to generate page data at a predetermined bit rate per plane per pixel (paragraph 17, lines 5-9),

an image processor to receive page data (104, figure 1A), to examine pixel data for a pixel or a group of pixels in the page data (paragraph 17, lines 9-12), either for individual pixels or in relation to neighboring pixels (paragraph 17, lines 13-16), and to render interim data that contains a multi-bit value per plane per pixel (paragraph 17, lines 5-12), the interim data including print engine control information for the pixel or the group of pixels (paragraph 19, lines 4-7), and

an I/O device to communicate the interim data (paragraph 18, lines 3-5).

(8) regarding claim 8:

Marshall et al. further discloses, a host machine, as defined in claim 7, wherein each multi-bit value comprises print parameters (paragraph 24, lines 1-11).

(9) regarding claim 9:

Marshall et al. further discloses, a host machine, as defined in claim 7, wherein the print parameters are selected from a group that includes [[as]] toner miser mode, tone explosion, and edge roll off (paragraph 44, lines 17-19; note that the claim calls for "selected from a group").

(10) regarding claim 10:

Marshall et al. further discloses, a printing system (paragraph 16, lines 1-3) comprising:

a host machine including (102, figure 1A),

means for generating page data at a predetermined bit rate per plane per pixel (paragraph 17, lines 5-9),

processor means (104, figure 1A) for receiving the page data and for rending interim data based on image data contained in a pixel or a group of pixels in the page data (paragraph 17, lines 5-12), the interim data containing a multi-bit per plane per pixel and print engine control information for the pixel or the group of pixels (paragraph 19, lines 4-7), and

an I/O device to communicate the interim data (paragraph 18, lines 3-5); and

a printing device including (120, figure 1A),

an I/O device to communicate the interim data (paragraph 18, lines 1-3),

generator means for receiving the interim data (paragraph 21, lines 6-9), for each multi-bit value (paragraph 21, lines 10-14), and generating a pulse code corresponding to the multi-bit value (paragraph 22, lines 1-8), and

print means receiving the pulse codes and to transform the pulse codes to a hardcopy image (paragraph 24, lines 1-4).

(11) regarding claim 11:

Marshall et al. further discloses, a printing system, as defined in claim 10, wherein each multi-bit value comprises print parameters (paragraph 24, lines 1-11).

(12) regarding claim 12:

Marshall et al. further discloses, a printing system, as defined in claim 11, wherein the print parameters are selected from a group that includes a toner miser mode, toner explosion, and edge roll off (paragraph 44, lines 17-19; note that the claim calls for “selected from a group”).

(13) regarding claim 13:

Marshall et al. further discloses, a method for rendering a hardcopy image (paragraph 24, lines 1-4), the method comprising:

generating page data at a selected bit rate per plane per pixel based on data contained in a pixel or a group of pixels (paragraph 17, lines 5-9),

rendering data to interim multi-bit values per plane per pixel (paragraph 17, lines 5-12,), the interim multi-bit values including print engine control information for the pixel or the group of pixels (paragraph 19, lines 4-7), generating pulse codes directly from the interim multi-bit values (paragraph 22, lines 1-8), and rendering a hard copy image from the pulse codes (paragraph 57, lines 1-6).

(14) regarding claim 14:

Marshall et al. further discloses, a method for rendering a hardcopy image as defined in claim 13, wherein each multi-bit value comprises print parameters (paragraph 24, lines 1-11).

(15) regarding claim 15:

Marshall et al. further discloses, a method for rendering a hardcopy image as defined in claim 14, wherein the print parameters are selected from a group that includes toner miser mode, toner explosion, and edge roll off (paragraph 44, lines 17-19; note that the claim calls for “selected from a group”).

(16) regarding claim 16:

Marshall et al. further discloses, a host machine (102, figure 1A) comprising:

means for generating page data at a predetermined bit rate per plane per pixel based on data contained in a pixel or a group of pixels (paragraph 17, lines 5-9),

means for receiving the page data and rendering interim data that contains a multi-bit value per plane per pixel (paragraph 17, lines 5-12), the interim data including print engine control information for that pixel or the group of pixels (paragraph 19, lines 4-7), and

means for communicating the interim data (paragraph 18, lines 3-5).

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Fall et al. (US Patent Number 5,991,515) discloses a method and apparatus for compressing and decompressing display data including methods for predicting compression results and correcting compression rations prior to the compression of object data.

Hattori (US Patent Number 6,369,911 B1) discloses a method to convert gray scale data of each pixel of image data into pulse-width data for each pixel.

5. Any inquiry concerning this communication or earlier communication from the examiner should be directed to Hilina Kassa whose telephone number is (571) 270-1676.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Twyler Lamb could be reached at (571) 272- 7406.

Any response to this action should be mailed to:

Commissioner of Patent and Trademarks
Washington, D.C. 20231

Or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Hilina Kassa
July 5, 2007

TWYLER LAMB
SUPERVISORY PATENT EXAMINER